

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/004046

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F04D19/04 F04D17/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F04D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/05310 A (DREXEL VOLKER ; GNAUCK PETER (DE); LEO ELEKTRONENMIKROSKOPIE GMBH (DE)) 17 January 2002 (2002-01-17) the whole document	1-25
X	EP 0 603 694 A (BALZERS-PFEIFFER GMBH) 29 June 1994 (1994-06-29) the whole document	26-47
A	claim 5	48-64
X	DE 24 42 614 A (SIEMENS AG) 18 March 1976 (1976-03-18) the whole document	1,25
X	US 6 193 461 B1 (HABLANIAN MARSBED) 27 February 2001 (2001-02-27) the whole document	1,25
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

12 April 2005

Date of mailing of the international search report

22 04 2005

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

Intern..... Application No  
PCT/GB2004/004046

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 302 667 A (THE BOC GROUP PLC) 16 April 2003 (2003-04-16) the whole document paragraphs [0015] - [0025] -----	26-47
A	US 5 733 104 A (GANSCHOW OTTO ET AL) 31 March 1998 (1998-03-31) the whole document -----	1,25

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International application No.  
PCT/GB2004/004046

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International Application No. PCT/ GB2004/ 004046

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-25

a differentially pumped vacuum system comprising a vacuum pump with a first and a second inlet in which 99% of the fluid pumped pass through at least one pumping stage of the vacuum pump

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2. claims: 26-47

a differentially pumped vacuum system comprising a vacuum pump incorporating a Gaede pumping stage for pumping the chamber with the highest pressure

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3. claims: 48-64

a compound vacuum pump with three pumping sections, a first and a second inlet and an additional inlet, which allows fluid flow through only a part of the third pumping section

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern:

Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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